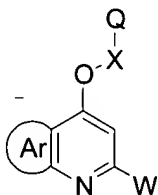


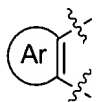
In the claims:

The Applicants are canceling claims 14, 30-32, 34, 37, 40, 45-51, 54-60 and 67-82 and wish to amend claims 1, 15, 28, and 33, as follows.

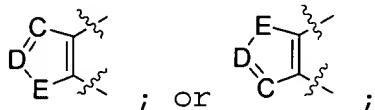
1. (Currently Amended) A compound of the formula:



or a pharmaceutically acceptable salt thereof, wherein:



represents:



wherein:

C and D are CR<sub>1</sub>, and

E represents sulfur,

where

R<sub>1</sub>, at each occurrence, is independently selected from the group consisting of hydrogen, halogen, cyano, halo(C<sub>1-6</sub>)alkyl, halo(C<sub>1-6</sub>)alkoxy, hydroxy, C<sub>1-6</sub>alkyl, amino, mono and di(C<sub>1-6</sub>)alkylamino, and C<sub>1-6</sub>alkoxy; and

$R_2$  is selected from the group consisting of hydrogen, halogen, cyano, halo( $C_1$ - $C_6$ )alkyl, halo( $C_1$ - $C_6$ )alkoxy, hydroxy,  $C_{1-6}$  alkyl, amino, and mono or di( $C_1$ - $C_6$ )alkylamino;

W is [aryl] phenyl or naphthyl which is unsubstituted or substituted with one or more  $R_3$ ; and

Q is pyridinyl, which is unsubstituted or substituted with one or more of  $R_4$ ;

$R_3$  and  $R_4$  at each occurrence are independently selected from the group consisting of hydrogen, halogen, hydroxy,  $-OR_6$ ,  $-NO_2$ ,  $-CN$ ,  $-SO_2NH_2$ ,  $-SO_2NHR_6$ ,  $-SO_2N(R_6)_2$ , amino,  $-NHR_6$ ,  $-N(R_6)_2$ ,  $-N(R_6)CO(R_6)$ ,  $-N(R_6)CO_2(R_6)$ ,  $-CONH_2$ ,  $-CONH(R_6)$ ,  $-CON(R_6)_2$ ,  $-CO_2(R_6)$ ,  $-S(R_6)$ ,  $-SO(R_6)$ ,  $-SO_2(R_6)$ , and  $R_7$ , wherein

$R_6$ , at each occurrence, is independently selected from the group consisting of  $C_{1-8}$  alkyl,  $C_{2-8}$  alkenyl,  $C_{2-8}$  alkynyl,  $C_{3-8}$  cycloalkyl,  $C_{3-8}$  cycloalkenyl, and  $C_{5-9}$  cycloalkynyl, each of which is unsubstituted or substituted with one or more substituents selected from the group consisting of hydroxy, oxo, halogen, amino,  $C_{1-8}$  alkoxy, and  $C_{1-8}$  alkyl,

$R_7$  at each occurrence is independently selected from the group consisting of  $C_{1-8}$  alkyl,  $[C_{1-8}]$   $C_{2-8}$  alkenyl,  $[C_{1-8}]$   $C_{2-8}$  alkynyl,  $C_{3-8}$  cycloalkyl,  $C_{3-8}$

cycloalkenyl, and C<sub>5-9</sub> cycloalkynyl, each of which is unsubstituted or substituted with one or more substituents selected from the group consisting of hydroxy, oxo, halogen, -OR<sub>6</sub>, C<sub>1-6</sub>alkyl, -NO<sub>2</sub>, -CN, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHR<sub>6</sub>, -SO<sub>2</sub>N(R<sub>6</sub>)<sub>2</sub>, amino, -NHR<sub>6</sub>, -N(R<sub>6</sub>)<sub>2</sub>, -N(R<sub>6</sub>)CO(R<sub>6</sub>), -N(R<sub>6</sub>)CO<sub>2</sub>(R<sub>6</sub>), -CONH<sub>2</sub>, -CONH(R<sub>6</sub>), -CON(R<sub>6</sub>)<sub>2</sub>, -CO<sub>2</sub>H, -CO<sub>2</sub>(R<sub>6</sub>), -S(R<sub>6</sub>), -SO(R<sub>6</sub>), and -SO<sub>2</sub>(R<sub>6</sub>), [and NR<sub>a</sub>R<sub>b</sub>, wherein

each NR<sub>a</sub>R<sub>b</sub> independently forms a monocyclic or bicyclic ring each of which may contain one or more double bonds, or one or more of oxo, O, S, SO, SO<sub>2</sub>, NH, or N(R<sub>2</sub>), wherein R<sub>2</sub> is defined above and independently selected at each occurrence; or

Q is a group of the formula NR<sub>8</sub>R<sub>9</sub> wherein

R<sub>8</sub> and R<sub>9</sub> are independently hydrogen or R<sub>7</sub>; or

R<sub>8</sub>, R<sub>9</sub> and the nitrogen to which they are attached form a

heterocycloalkyl ring having from 5 to 8 ring atoms and

where 1 or 2 of the ring atoms are selected from N, S, O,

with remaining ring members being carbon, CH or CH<sub>2</sub>, which

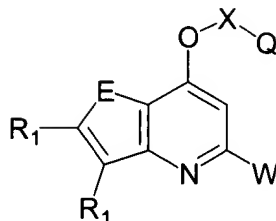
heterocycloalkyl ring is unsubstituted or substituted with

one or more independently selected R<sub>4</sub> groups;]

X is -(CH<sub>2</sub>)<sub>n</sub>- or -(CH<sub>2</sub>)<sub>n</sub>(C=O)-, wherein each n is independently 1, 2, or 3.

2-8. (Cancelled)

9. (Original) A compound or salt according to claim 1 of formula:



10. (Cancelled)

11. (Previously Amended) A compound or salt according to Claim 9, wherein

*C1 cont'd*

W is phenyl, which is unsubstituted or substituted with from 1 to 3 substituents independently selected from halogen, hydroxy, C<sub>1-6</sub>alkoxy, -nitro, -CN, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHR<sub>2</sub>, -SO<sub>2</sub>N(C<sub>1-6</sub>alkyl)<sub>2</sub>, amino, -NHC<sub>1-6</sub>alkyl, -N(C<sub>1-6</sub>alkyl)<sub>2</sub>, -N(C<sub>1-6</sub>alkyl)CO(C<sub>1-6</sub>alkyl), -N(C<sub>1-6</sub>alkyl)CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -CONH<sub>2</sub>, -CONH(C<sub>1-6</sub>alkyl), -CON(C<sub>1-6</sub>alkyl)<sub>2</sub>, -CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -S(C<sub>1-6</sub>alkyl), -SO(C<sub>1-6</sub>alkyl), -SO<sub>2</sub>(C<sub>1-6</sub>alkyl), and C<sub>1-6</sub>alkyl optionally substituted with one or more substituents independently selected from hydroxy, halogen, and amino.

12. (Original) A compound or salt according to claim 9, wherein X is CH<sub>2</sub>.

13. (Cancelled)

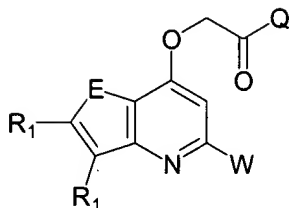
14. (Cancelled)

15. (Currently Amended) A compound or salt according to Claim 12; wherein

Q is [selected from phenyl,] pyridyl, [pyrimidinyl, pyrazolyl, triazolyl, imidazolyl, pyrrolyl, piperidinyl, and pyrrolidinyl, each of] which is unsubstituted or substituted with from 1 to 3 substituents independently selected from halogen, hydroxy, C<sub>1-6</sub>alkoxy, -CN, amino, mono- and di(C<sub>1-6</sub>)alkylamino, and C<sub>1-6</sub> alkyl which is unsubstituted or substituted with 1 or more substituents independently chosen from hydroxy, oxo, amino, halogen, C<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, and mono- and di(C<sub>1-6</sub>)alkylamino; and

W is phenyl which is unsubstituted or substituted with from 1 to 3 substituents independently selected from: halogen, hydroxy, C<sub>1-6</sub>alkoxy, -nitro, -CN, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHR<sub>2</sub>, -SO<sub>2</sub>N(C<sub>1-6</sub>alkyl)<sub>2</sub>, amino, -NHC<sub>1-6</sub>alkyl, -N(C<sub>1-6</sub>alkyl)<sub>2</sub>, -N(C<sub>1-6</sub>alkyl)CO(C<sub>1-6</sub>alkyl), -N(C<sub>1-6</sub>alkyl)CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -CONH<sub>2</sub>, -CONH(C<sub>1-6</sub>alkyl), -CON(C<sub>1-6</sub>alkyl)<sub>2</sub>, -CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -S(C<sub>1-6</sub>alkyl), -SO(C<sub>1-6</sub>alkyl), -SO<sub>2</sub>(C<sub>1-6</sub>alkyl), and C<sub>1-6</sub>alkyl which is unsubstituted or substituted with one or more substituents independently selected from hydroxy, halogen, and amino.

16. (Original) A compound or salt according to Claim 1 of formula:



17. (Cancelled)

18. (Previously Amended) A compound or salt according to Claim 16, wherein

W is phenyl which is unsubstituted or substituted with from 1 to 3 substituents independently selected from halogen, hydroxy, C<sub>1-6</sub>alkoxy, -nitro, -CN, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHR<sub>2</sub>, -SO<sub>2</sub>N(C<sub>1-6</sub>alkyl)<sub>2</sub>, amino, -NHC<sub>1-6</sub>alkyl, -N(C<sub>1-6</sub>alkyl)<sub>2</sub>, -N(C<sub>1-6</sub>alkyl)CO(C<sub>1-6</sub>alkyl), -N(C<sub>1-6</sub>alkyl)CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -CONH<sub>2</sub>, -CONH(C<sub>1-6</sub>alkyl), -CON(C<sub>1-6</sub>alkyl)<sub>2</sub>, -CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -S(C<sub>1-6</sub>alkyl), -SO(C<sub>1-6</sub>alkyl), -SO<sub>2</sub>(C<sub>1-6</sub>alkyl), and C<sub>1-6</sub>alkyl which is unsubstituted or substituted with one or more substituents independently selected from hydroxy, halogen, and amino.

19. (Previously Amended) A compound or salt according to Claim 18, wherein:

Q is pyridyl, which is unsubstituted or substituted with from 1 to 3 substituents independently selected from: halogen, hydroxy, C<sub>1-6</sub>alkoxy, -CN, amino, mono- and di(C<sub>1-6</sub>)alkylamino, and C<sub>1-6</sub> alkyl which is unsubstituted or substituted with 1 or more substituents chosen from hydroxy, oxo, amino, halogen, C<sub>1-6</sub>alkoxy, and mono- and di(C<sub>1-6</sub>)alkylamino; and

W is phenyl which is unsubstituted or substituted with from 1 to 3 substituents independently selected from halogen, hydroxy, C<sub>1-6</sub>alkoxy, -nitro, -CN, -SO<sub>2</sub>NH<sub>2</sub>, -SO<sub>2</sub>NHR<sub>2</sub>, -SO<sub>2</sub>N(C<sub>1-6</sub>alkyl)<sub>2</sub>, amino, -NHC<sub>1-6</sub>alkyl, -N(C<sub>1-6</sub>alkyl)<sub>2</sub>, -N(C<sub>1-6</sub>alkyl)CO(C<sub>1-6</sub>alkyl), -N(C<sub>1-6</sub>alkyl)CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -CONH<sub>2</sub>, -CONH(C<sub>1-6</sub>alkyl), -CON(C<sub>1-6</sub>alkyl)<sub>2</sub>, -CO<sub>2</sub>(C<sub>1-6</sub>alkyl), -S(C<sub>1-6</sub>alkyl), -SO(C<sub>1-6</sub>alkyl), -SO<sub>2</sub>(C<sub>1-6</sub>alkyl), and C<sub>1-6</sub>alkyl which is unsubstituted or substituted with one or more substituents independently selected from hydroxy, halogen, and amino

20-26. (Cancelled)

27. (Original) A compound according to Claim 1, which is 5-(4-Fluorophenyl)-7-[(2-pyridyl)-methyloxy]-thieno[3,2-b]pyridine.

28. (Currently Amended) A compound according to Claim 1, which is 5-Phenyl-7-[(3-pyridyl)methyloxy][ ]-thieno[3,2-b]pyridine.

29-32 (Cancelled)

33. (Currently Amended) A compound according to Claim 1, which is 7-[(4-Pyridyl)methyloxy][ ]-5-phenylthieno[3,2-b]pyridine.

34-52. (Cancelled)

53. (Previously Amended) A pharmaceutical composition comprising a compound or salt according to Claim 1 combined with a pharmaceutically acceptable carrier or excipient.

54-60. (Cancelled)

61. (Original) A method for the treatment of anxiety, depression, a sleep disorder, or Alzheimer's dementia comprising administering a therapeutically effective amount of a compound or salt of Claim 1 to a patient in need thereof.



62. (Original) A method for demonstrating the presence of GABA<sub>A</sub> receptors in cell or tissue samples, said method comprising:

preparing a plurality of matched cell or tissue samples,

preparing at least one control sample by contacting (under conditions that permit binding of R015-1788 to GABA<sub>A</sub> receptors within cell and tissue samples) at least one of the matched cell or tissue samples (that has not previously been contacted with any compound or salt of Claim 1) with a control solution comprising a detectably-labeled preparation of a selected compound or salt of Claim 1 at a first measured molar concentration, said control solution further comprising an unlabelled preparation of the selected compound or salt at a second measured molar concentration, which second measured concentration is greater than said first measured concentration,

preparing at least one experimental sample by contacting (under conditions that permit binding of R015-1788 to GABA<sub>A</sub> receptors within cell and tissue samples) at least one of the matched cell or tissue samples (that has not previously been contacted with any compound or salt of Claim 1) with an experimental solution comprising the detectably-labeled preparation of the selected compound or salt at the first measured molar concentration, said experimental solution not further comprising an unlabelled preparation of any compound or

salt of any one of Claims 1 at a concentration greater than or equal to said first measured concentration;

washing the at least one control sample to remove unbound selected compound or salt to produce at least one washed control sample;

washing the at least one experimental sample to remove unbound selected compound or salt to produce at least one washed experimental sample;

measuring the amount of detectable label of any remaining bound detectably-labeled selected compound or salt in the at least one washed control sample;

measuring the amount detectable label of any remaining bound detectably-labeled selected compound or salt in the at least one washed experimental sample;

comparing the amount of detectable label measured in each of the at least one washed experimental sample to the amount of detectable label measured in each of the at least one washed control sample

wherein, a comparison that indicates the detection of a greater amount of detectable label in the at least one washed experimental sample than is detected in any of the at least one washed control samples demonstrates the presence of GABA<sub>A</sub> receptors in that experimental sample.

63. (Previously Amended) The method of Claim 62 in which the cell or tissue sample is a tissue section.

64. (Previously Amended) The method of Claim 62 in which the detectable label is a radioactive label or a directly or indirectly luminescent label.

65. (Previously Amended) The method of Claim 62 in which each cell or tissue sample is a tissue section, the detectable label is a radioactive label or a directly or indirectly luminescent label, and the detectable label is detected autoradiographically to generate an autoradiogram for each of the at least one samples.

66. (Previously Amended) The method of Claim 62 in which each measurement of the amount of detectable label in a sample is carried out by viewing the autoradiograms and the comparison is a comparison of the exposure density of the autoradiograms.

67-82 (Cancelled)

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